

I B. Tech I Semester Supplementary Examinations, January - 2020
ENGINEERING DRAWING
 (Com to ECE, EIE, E Com E)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
 2. Answering the question in **Part-A** is compulsory
 3. Answer any **FOUR** Questions from **Part-B**

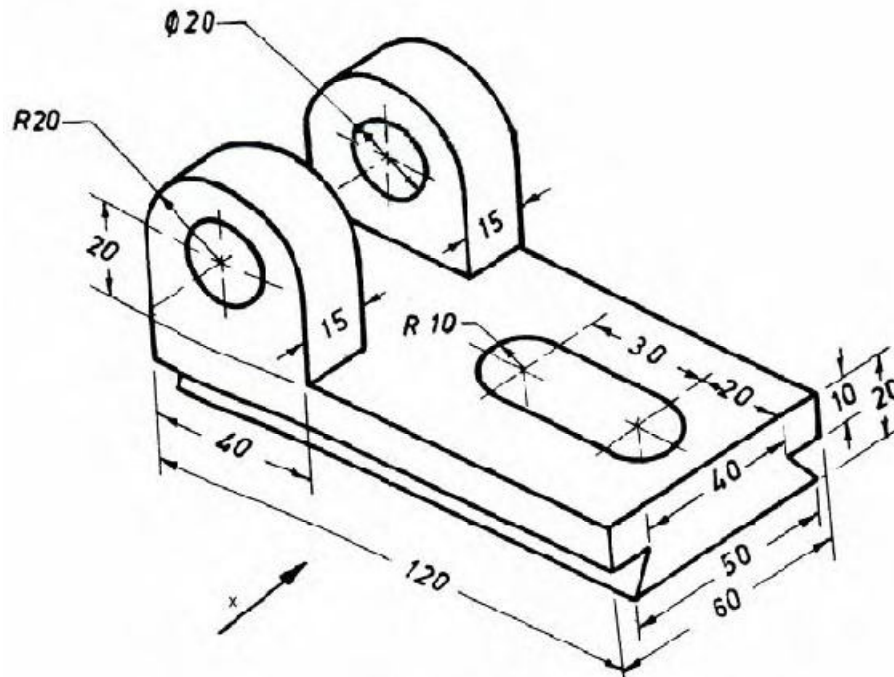
PART -A

1. a) Write the department of your B.Tech using BIS standard lettering. (2M)
(For Example Department of Mechanical Engineering)
- b) Construct a scale of chord to measure 75^0 . (2M)
- c) Two points A and B are in the HP the point A is 30 mm in front of the VP. While B is behind the VP. The distance between their projections is 75 mm. Draw its projections. (2M)
- d) A square plane of side 40mm is in the HP and its sides equal angled to the VP. Draw its projections. (2M)
- e) A square lamina with 40mm side has its surface parallel to and 30mm in front of the VP. Draw the projections, if one of its side is inclined at 30^0 to the H.P. (2M)
- f) A hexagonal prism of 30mm side and 70mm long axis is resting on the HP with one of its rectangular faces and the axis is perpendicular to the VP. Draw the projections of the solid? (2M)
- g) Draw the isometric view of a semi-circle 50 mm diameter when its diameter is horizontal. (2M)

PART -B

2. a) Construct an octagon using general method? (4M)
- b) A point moves in such a way that its distance from a fixed straight line is always 1.5 times the distance from a fixed point which is 45mm away from the fixed straight line. Draw the locus of the point. Name the curve. Also draw a tangent and normal at a point 60mm from the fixed straight line. (10M)
3. a) An area of 144 sq cm on a map represents an area 36 sq km on the field. Find the R.F. of the scale for this map and draw a diagonal scale to show kilometers, hectameters and decameters and to measure kilometers. Indicate on the scale a distance of 6 kilometers, 7 hectameters and 5 decameters. (7M)
- b) A point C is 40mm below the HP and 20mm behind the VP, another points D and E are 60mm above the HP and in front of VP, 90 mm below the HP and 45mm in front of the VP respectively draw the projections of all points on same reference line. (7M)
4. a) The front view of a line MN, 80 mm long measures 55 mm its one end is 30mm below the HP and 45mm behind the VP. (4M)

- b) A line PQ 100mm long is inclined at 30° to the HP and at 45° to the VP. Its mid point is in the VP and 20mm above the HP. Draw its projections, if its end P is in the third quadrant and Q in the first quadrant. (10M)
5. a) A hexagonal lamina with a 30mm long side has one of the sides perpendicular to the VP. The surface of the lamina is parallel to and 15mm above the HP. Draw its projections. (7M)
- b) A rectangular plane 60mm x 40mm size is resting on the HP on one of its shorter edges with its surface inclined at 60° to HP and perpendicular to the VP. Shortest edge is making an angle of 30° with the VP. Draw its projections. (7M)
6. a) A pentagonal pyramid of side of its base 30mm and 75mm long axis is resting on its base on the HP and a side of its base makes an angle 60° . Draw its projections. (4M)
- b) A square pyramid, base 40 mm side and axis 90 mm long, has a triangular face on the ground and the vertical plane containing the axis makes an angle of 45° with the VP. Draw its projections. (10M)
7. a) An orthographic side view of an engineering object appears like a circle of its radius 30mm. Transform it into a corresponding isometric view. (4M)
- b) Draw the following orthographic views of the object given in figure below. All dimensions are in mm.
 (i) Front view (ii) Top view



(10M)